

**COMBINED INCREMENTAL AND LINEAR MAGNETIC SENSOR****ABSTRACT OF THE DISCLOSURE**

A magnetic sensor provides an output voltage range having first and second linear slopes. Proper selection of magnetic sensor dimensions enables changes in magnetic flux density upon the passage of at least one tooth and one slot of a target wheel past the magnetic sensor to be represented as a linear magnetic sensor output comprised of at least one linear range whereby linear interpolation of position is possible with appropriate signal processing algorithms.